

1600

## CRF Errors Corrected by the STIC Systems Branch.

CRF Processing Date: 5/19/2003

Edited by: *[Signature]*Verified by: *[Signature]*

(STIC staff)

Serial Number: 09/634,287C

ENTERED

TECH CENTER 1600/2900

MAY 15 2003

RECEIVED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☒ Deleted extra, invalid, headings used by an applicant, specifically:  
*Sequence 3 - deleted alphabetical headings*
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☐ Other: \_\_\_\_\_

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95



1600

## RAW SEQUENCE LISTING

DATE: 05/09/2003

PATENT APPLICATION: US/09/634,287C

TIME: 09:47:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05092003\I634287C.raw

3 <110> APPLICANT: BRISTOL-MYERS SQUIBB COMPANY  
 5 <120> TITLE OF INVENTION: AGGRECAN DEGRADING METALLO PROTEASES  
 7 <130> FILE REFERENCE: DM6090 DIV  
 9 <140> CURRENT APPLICATION NUMBER: 09/634,287C  
 10 <141> CURRENT FILING DATE: 2000-08-09  
 12 <150> PRIOR APPLICATION NUMBER: 60/053,850  
 13 <151> PRIOR FILING DATE: 1997-07-25  
 15 <150> PRIOR APPLICATION NUMBER: 60/055,836  
 16 <151> PRIOR FILING DATE: 1997-08-15  
 18 <150> PRIOR APPLICATION NUMBER: 60/062,169  
 19 <151> PRIOR FILING DATE: 1997-10-16  
 21 <160> NUMBER OF SEQ ID NOS: 48  
 23 <170> SOFTWARE: PatentIn version 3.1  
 25 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 4192  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: Homo sapiens  
 30 <400> SEQUENCE: 1

P.6

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35	gccagagaag ctgcagaaga cacaggcagg gagagacaaa gatccaggaa aggagggctc	180
37	aggaggagag tttggagaag ccagacccct gggcacctct cccaagccca aggactaagt	240
39	tttctccatt tcctttaacg gtccctcagcc cttctgaaaa ctttgctctt gaccttggca	300
41	ggagtccaag cccccaggct acagagagga gctttccaaa gctagggtgt ggaggacttg	360
43	gtgccctaga cggcctcagt cccctccagc tgcagtacca gtgccatgtc ccagacaggc	420
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49	ctgcctcag cccggtggc cagcccccct ccccgggagg aggagatcgt gttccagag	600
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63	cctgccagcg gtcaaggctc catgtgcaac gtcaaggctc ctcttggaag cccagcccc	1020
65	agaccccgaa gagccaagcg ctttgcttca ctgagtagat ttgtggagac actggtggtg	1080
67	gcagatgaca agatggcgc attccacggt gcggggctaa agcgtacct gctaacagt	1140
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Input Set : A:\PTO.AMC.txt

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85 ccctgcagtg cccgcttcat cactgacttc ctggacaatg gctatgggca ctgtctctta 1680
87 gacaaaccag aggtccatt gcatctgcct gtgactttcc ctggcaagga ctatgatgct 1740
89 gaccgccagt gccagctgac ctctggggccc gactcacgcc attgtccaca gctgccgcgc 1800
91 ccctgtgctg ccctctgggt ctctggccac ctcaatggcc atgccatgtg ccagaccaa 1860
93 cactegccct gggccgatgg cacaccctgc gggcccgac aggcctgcat gggtggtcgc 1920
95 tgccctccaca tggaccagct ccaggacttc aatattccac aggcctgggtg ctgggggtcct 1980
97 tggggaccat ggggtgactg ctctcgacc tgtgggggtg gtgtccagtt ctccctccga 2040
99 gactgcacga ggctgtccc ccggaatggt ggcaagtact gtgagggccg ccgtaccgc 2100
101 ttccgctcct gcaacactga ggactgccc actggctcag ccctgacctt ccgcgaggag 2160
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109 ccggacagct cctcggtctg tgtccagggc cgatgcatcc atgctggctg tgatcgcatc 2400
111 attggtccca agaagaagt tgacaagtgc atggtgtgcg gaggggacgg ttctggttgc 2460
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172 <210> SEQ ID NO: 2
173 <211> LENGTH: 837
174 <212> TYPE: PRT
175 <213> ORGANISM: Homo sapiens

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## RAW SEQUENCE LISTING

DATE: 05/09/2003

PATENT APPLICATION: US/09/634,287C

TIME: 09:47:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05092003\I634287C.raw

177 &lt;400&gt; SEQUENCE: 2

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180 1 5 10 15
183 Leu Trp Gly Ala Gln Pro Cys Leu Leu Leu Pro Ile Val Pro Leu Ser
184 20 25 30
187 Trp Leu Val Trp Leu Leu Leu Leu Leu Leu Ala Ser Leu Leu Pro Ser
188 35 40 45
191 Ala Arg Leu Ala Ser Pro Leu Pro Arg Glu Glu Glu Ile Val Phe Pro
192 50 55 60
195 Glu Lys Leu Asn Gly Ser Val Leu Pro Gly Ser Gly Ala Pro Ala Arg
196 65 70 75 80
199 Leu Leu Cys Arg Leu Gln Ala Phe Gly Glu Thr Leu Leu Leu Glu Leu
200 85 90 95
203 Glu Gln Asp Ser Gly Val Gln Val Glu Gly Leu Thr Val Gln Tyr Leu
204 100 105 110
207 Gly Gln Ala Pro Glu Leu Leu Gly Gly Ala Glu Pro Gly Thr Tyr Leu
208 115 120 125
211 Thr Gly Thr Ile Asn Gly Asp Pro Glu Ser Val Ala Ser Leu His Trp
212 130 135 140
215 Asp Gly Gly Ala Leu Leu Gly Val Leu Gln Tyr Arg Gly Ala Glu Leu
216 145 150 155 160
219 His Leu Gln Pro Leu Glu Gly Gly Thr Pro Asn Ser Ala Gly Gly Pro
220 165 170 175
223 Gly Ala His Ile Leu Arg Arg Lys Ser Pro Ala Ser Gly Gln Gly Pro
224 180 185 190
227 Met Cys Asn Val Lys Ala Pro Leu Gly Ser Pro Ser Pro Arg Pro Arg
228 195 200 205
231 Arg Ala Lys Arg Phe Ala Ser Leu Ser Arg Phe Val Glu Thr Leu Val
232 210 215 220
235 Val Ala Asp Asp Lys Met Ala Ala Phe His Gly Ala Gly Leu Lys Arg
236 225 230 235 240
239 Tyr Leu Leu Thr Val Met Ala Ala Ala Lys Ala Phe Lys His Pro
240 245 250 255
243 Ser Ile Arg Asn Pro Val Ser Leu Val Val Thr Arg Leu Val Ile Leu
244 260 265 270
247 Gly Ser Gly Glu Glu Gly Pro Gln Val Gly Pro Ser Ala Ala Gln Thr
248 275 280 285
251 Leu Arg Ser Phe Cys Ala Trp Gln Arg Gly Leu Asn Thr Pro Glu Asp
252 290 295 300
255 Ser Asp Pro Asp His Phe Asp Thr Ala Ile Leu Phe Thr Arg Gln Asp
256 305 310 315 320
259 Leu Cys Gly Val Ser Thr Cys Asp Thr Leu Gly Met Ala Asp Val Gly
260 325 330 335
263 Thr Val Cys Asp Pro Ala Arg Ser Cys Ala Ile Val Glu Asp Asp Gly
264 340 345 350
267 Leu Gln Ser Ala Phe Thr Ala Ala His Glu Leu Gly His Val Phe Asn
268 355 360 365
271 Met Leu His Asp Asn Ser Lys Pro Cys Ile Ser Leu Asn Gly Pro Leu
272 370 375 380

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TIME: 09:47:36

Input Set : A:\PTO.AMC.txt

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276 385                               390                               395                               400
279 Glu Glu Pro Trp Ser Pro Cys Ser Ala Arg Phe Ile Thr Asp Phe Leu
280                               405                               410                               415
283 Asp Asn Gly Tyr Gly His Cys Leu Leu Asp Lys Pro Glu Ala Pro Leu
284                               420                               425                               430
287 His Leu Pro Val Thr Phe Pro Gly Lys Asp Tyr Asp Ala Asp Arg Gln
288                               435                               440                               445
291 Cys Gln Leu Thr Phe Gly Pro Asp Ser Arg His Cys Pro Gln Leu Pro
292                               450                               455                               460
295 Pro Pro Cys Ala Ala Leu Trp Cys Ser Gly His Leu Asn Gly His Ala
296 465                               470                               475                               480
299 Met Cys Gln Thr Lys His Ser Pro Trp Ala Asp Gly Thr Pro Cys Gly
300                               485                               490                               495
303 Pro Ala Gln Ala Cys Met Gly Gly Arg Cys Leu His Met Asp Gln Leu
304                               500                               505                               510
307 Gln Asp Phe Asn Ile Pro Gln Ala Gly Gly Trp Gly Pro Trp Gly Pro
308                               515                               520                               525
311 Trp Gly Asp Cys Ser Arg Thr Cys Gly Gly Gly Val Gln Phe Ser Ser
312                               530                               535                               540
315 Arg Asp Cys Thr Arg Pro Val Pro Arg Asn Gly Gly Lys Tyr Cys Glu
316 545                               550                               555                               560
319 Gly Arg Arg Thr Arg Phe Arg Ser Cys Asn Thr Glu Asp Cys Pro Thr
320                               565                               570                               575
323 Gly Ser Ala Leu Thr Phe Arg Glu Glu Gln Cys Ala Ala Tyr Asn His
324                               580                               585                               590
327 Arg Thr Asp Leu Phe Lys Ser Phe Pro Gly Pro Met Asp Trp Val Pro
328                               595                               600                               605
331 Arg Tyr Thr Gly Val Ala Pro Gln Asp Gln Cys Lys Leu Thr Cys Gln
332                               610                               615                               620
335 Ala Arg Ala Leu Gly Tyr Tyr Tyr Val Leu Glu Pro Arg Val Val Asp
336 625                               630                               635                               640
339 Gly Thr Pro Cys Ser Pro Asp Ser Ser Ser Val Cys Val Gln Gly Arg
340                               645                               650                               655
343 Cys Ile His Ala Gly Cys Asp Arg Ile Ile Gly Ser Lys Lys Phe
344                               660                               665                               670
347 Asp Lys Cys Met Val Cys Gly Gly Asp Gly Ser Gly Cys Ser Lys Gln
348                               675                               680                               685
351 Ser Gly Ser Phe Arg Lys Phe Arg Tyr Gly Tyr Asn Asn Val Val Thr
352                               690                               695                               700
355 Ile Pro Ala Gly Ala Thr His Ile Leu Val Arg Gln Gln Gly Asn Pro
356 705                               710                               715                               720
359 Gly His Arg Ser Ile Tyr Leu Ala Leu Lys Leu Pro Asp Gly Ser Tyr
360                               725                               730                               735
363 Ala Leu Asn Gly Glu Tyr Thr Leu Met Pro Ser Pro Thr Asp Val Val
364                               740                               745                               750
367 Leu Pro Gly Ala Val Ser Leu Arg Tyr Ser Gly Ala Thr Ala Ala Ser
368                               755                               760                               765
371 Glu Thr Leu Ser Gly His Gly Pro Leu Ala Gln Pro Leu Thr Leu Gln

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## RAW SEQUENCE LISTING

DATE: 05/09/2003

PATENT APPLICATION: US/09/634,287C

TIME: 09:47:36

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\05092003\I634287C.raw

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376 785      790      795      800
379 Phe Val Pro Arg Pro Thr Pro Ser Thr Pro Arg Pro Thr Pro Gln Asp
380      805      810      815
383 Trp Leu His Arg Arg Ala Gln Ile Leu Glu Ile Leu Arg Arg Arg Pro
384      820      825      830
387 Trp Ala Gly Arg Lys
388      835
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W--> 393 000
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396 <211> LENGTH: 26
397 <212> TYPE: PRT
398 <213> ORGANISM: Bos taurus
400 <400> SEQUENCE: 4
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407      20      25
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411 <211> LENGTH: 7
412 <212> TYPE: PRT
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418 1      5
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422 <211> LENGTH: 11
423 <212> TYPE: PRT
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434 <212> TYPE: DNA
435 <213> ORGANISM: Mus musculus
437 <400> SEQUENCE: 7
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441 <210> SEQ ID NO: 8
442 <211> LENGTH: 23
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446 <400> SEQUENCE: 8
447 ggccctggaa agctcttgaa gag      23
450 <210> SEQ ID NO: 9
451 <211> LENGTH: 23

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RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 05/09/2003  
PATENT APPLICATION: US/09/634,287C      TIME: 09:47:37

Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\05092003\I634287C.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:21; Xaa Pos. 12



1600

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

3 <110> APPLICANT: BRISTOL-MYERS SQUIBB COMPANY  
 5 <120> TITLE OF INVENTION: AGGRECAN DEGRADING METALLO PROTEASES  
 7 <130> FILE REFERENCE: DM6090 DIV  
 9 <140> CURRENT APPLICATION NUMBER: 09/634,287C  
 10 <141> CURRENT FILING DATE: 2000-08-09  
 12 <150> PRIOR APPLICATION NUMBER: 60/053,850  
 13 <151> PRIOR FILING DATE: 1997-07-25  
 15 <150> PRIOR APPLICATION NUMBER: 60/055,836  
 16 <151> PRIOR FILING DATE: 1997-08-15  
 18 <150> PRIOR APPLICATION NUMBER: 60/062,169  
 19 <151> PRIOR FILING DATE: 1997-10-16  
 21 <160> NUMBER OF SEQ ID NOS: 48  
 23 <170> SOFTWARE: PatentIn version 3.1

Does Not Comply  
Corrected Diskette Needed

## ERRORED SEQUENCES

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 E--> 392 <400> SEQUENCE: ~~SEQ ID NO: 3~~  
 W--> 393 000  
 395 <210> SEQ ID NO: 4  
 396 <211> LENGTH: 26  
 397 <212> TYPE: PRT  
 398 <213> ORGANISM: Bos taurus  
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 411 <211> LENGTH: 7  
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 422 <211> LENGTH: 11  
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 424 <213> ORGANISM: Bos taurus  
 426 <400> SEQUENCE: 6  
 428 Ala Leu Gly Tyr Tyr Tyr Val Leu Asp Pro Arg  
 429 1 5 10



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Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

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432 <210> SEQ ID NO: 7
433 <211> LENGTH: 21
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435 <213> ORGANISM: Mus musculus
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441 <210> SEQ ID NO: 8
442 <211> LENGTH: 23
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446 <400> SEQUENCE: 8
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451 <211> LENGTH: 23
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453 <213> ORGANISM: Homo sapiens
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462 <213> ORGANISM: Homo sapiens
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471 <213> ORGANISM: Homo sapiens
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487 <211> LENGTH: 17
488 <212> TYPE: PRT
489 <213> ORGANISM: Homo sapiens
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497 Lys
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502 <211> LENGTH: 3250
503 <212> TYPE: DNA
504 <213> ORGANISM: Homo sapiens
506 <400> SEQUENCE: 14

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## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

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511	atgctgctcg	ggtgggcgtc	cctgctgctg	tgcgcgttcc	gcctgcccct	ggcgcgggtc	180
513	ggccccgcgc	cgacacctgc	ccaggataaa	gccgggcagc	ctccgactgc	tgcagcagcc	240
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517	ccgcaccccc	tggcgacgcg	gcgcaggagc	aaggggctgg	tgcagaacat	cgaccaactc	360
519	tactccggcg	gcggcaaggt	gggtacacct	gtctacgcgg	gcggccggag	gttccctctg	420
521	gacctggagc	gagatggttc	gggtggcatt	gctggcttcg	tgcccgcagg	aggcgggacg	480
523	agtgcgccct	ggcgccaccg	gagccactgc	ttctatcggg	gcacagtggg	cgctagtccc	540
525	cgctctctgg	ctgtctttga	cctctgtggg	ggtctcgacg	gcttcttcgc	ggtcaagcac	600
527	gcgcgctaca	ccctaaagcc	actgctgcgc	ggaccctggg	cggaggaaga	aaaggggcgc	660
529	gtgtacgggg	atgggtccgc	acggatcctg	cacgtctaca	cccgcgaggg	cttcagcttc	720
531	gaggccctgc	cgcgcgcgcg	cagctgcgaa	accccccgt	ccacaccgga	ggcccacgag	780
533	catgctccgg	cgcacagcaa	cccagcggga	cgcgcagcac	tggcctcgca	gctcttggac	840
535	cagtccgctc	tctcgcccgc	tgggggctca	ggaccgcaga	cgtgggtggc	gcggcggcgc	900
537	cgctccatct	cccgggcccc	ccaggtggag	ctgcttctgg	tggctgacgc	gtccatggcg	960
539	cggttgtatg	gccggggcct	gcagcattac	ctgctgaccc	tggcctccat	cgccaatagg	1020
541	ctgtacagcc	atgctagcat	cgagaaccac	atccgcctgg	ccgtgggtgaa	ggtgggtggtg	1080
543	ctaggcgaca	aggacaagag	cctggaagtg	agcaagaacg	ctgccaccac	actcaagaac	1140
545	ttttgcaagt	ggcagcacca	acacaaccag	ctgggagatg	accatgagga	gcactacgat	1200
547	gcagctatcc	tgtttactcg	ggaggattta	tgtgggcata	attcatgtga	caccctggga	1260
549	atggcagacg	ttgggaccat	atgtttctca	gagcgcagct	gtgctgtgat	tgaagacgat	1320
551	ggcctccacg	cagccttcac	tgtggctcac	gaaatcggac	atttacttgg	cctctcccat	1380
553	gacgattcca	aattctgtga	agagaccttt	ggttccacag	aagataagcg	cttaattgtct	1440
555	tccatcctta	ccagcattga	tgcattctaag	ccctgggtcca	aatgcacttc	agccaccatc	1500
557	acagaattcc	tggatgatgg	ccatggtaac	tgtttgctgg	acctaccacg	aaagcagatc	1560
559	ctgggccccg	aagaactccc	aggacagacc	tacgatgcca	cccagcagtg	caacctgaca	1620
561	ttcgggcctg	agtactccgt	gtgtcccggc	atggatgtct	gtgctgcct	gtggtgtgct	1680
563	gtggtacgcc	agggccagat	ggtctgtctg	accaagaagc	tgctgcgggt	ggaagggacg	1740
565	ccttgtggaa	aggggagaat	ctgcctgcag	ggcaaagtgt	tggacaaaac	caagaaaaaa	1800
567	tattattcaa	cgtcaagcca	tggcaactgg	ggatcttggg	gacctggggg	ccagtgttct	1860
569	cgctcatgtg	gaggaggagt	gcagtttgcc	tatcgtcact	gtaataaccc	tgctcccaga	1920
571	aacaacggac	gctactgcac	agggaagagg	gccatctacc	gctcctgcag	tctcatgccc	1980
573	tgcccaccca	atggtaaata	atttcgtcat	gaacagtgtg	aggccaaaaa	tggctatcag	2040
575	tctgatgcaa	aaggagtcaa	aacttttgtg	gaatgggttc	ccaaatatgc	aggtgtcctg	2100
577	ccagcggatg	tgtgcaagct	gacctgcaga	gccaaaggca	ctggctacta	tgtggtattt	2160
579	tctccaaagg	tgaccgatgg	cactgaatgt	aggccgtaca	gtaattccgt	ctgcgtccgg	2220
581	gggaagtgtg	tgagaactgg	ctgtgacggc	atcattggct	caaagctgca	gtatgacaag	2280
583	tgcggagtat	gtggaggaga	caactccagc	tgtacaaaga	ttgttggaac	ctttaataag	2340
585	aaaagtaagg	gttacactga	cgtggtgagg	attcctgaag	gggcaaccca	cataaaagtt	2400
587	cgacagttca	aagccaaaga	ccagactaga	ttcactgcct	atttagccct	gaaaaagaaa	2460
589	aacggtgagt	accttatcaa	tggaaagtac	atgatctcca	cttcagagac	tatcattgac	2520
591	atcaatggaa	ctatagcgaa	ctatagcggt	tggagccaca	gggatgactt	cctgcatggc	2580
593	atgggctact	ctgccaacgaa	ggaaattcta	atagtgcaga	ttcttgcaac	agaccccact	2640
595	aaaccattag	atgtccgtta	tagctttttt	gttcccaaga	agtccactcc	aaaagtaaac	2700
597	tctgtcacta	gtcatggcag	caataaagtg	ggatcacaca	cttcgcagcc	gcagtgggtc	2760
599	acgggccccat	ggctcgccctg	ctctaggacc	tgtgacacag	gttggcacac	cagaacgggtg	2820
601	cagtgcacgg	atggaaaccg	gaagtttagca	aaaggatgtc	ctctctccca	aaggccttct	2880
603	gcgtttaagc	aatgcttgtt	gaagaaatgt	tagcctgtgg	ttatgatctt	atgcacaaag	2940

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

605 ataactggag gattcagcac cgatgcagtc gtggtgaaca ggaggtctac ctaacgcaca 3000
607 gaaagtcacg cttcagtgac attgtcaaca ggagtccaat tatgggcaga atctgctctc 3060
609 tgtgacccaaa agaggatgtg cactgcttca cgtgacagtg gtgaccttgc aatatagaaa 3120
611 aacttggggag ttattgaaca tcccctggga ttacaagaaa cactgatgaa tgttaaatca 3180
613 ggggacattt gaagatggca gaactgtctc ccccttgtca cctacctctg aatagaatgt 3240
615 ctttaatggt 3250
618 <210> SEQ ID NO: 15
619 <211> LENGTH: 930
620 <212> TYPE: PRT
621 <213> ORGANISM: Homo sapiens
623 <400> SEQUENCE: 15
625 Met Leu Leu Gly Trp Ala Ser Leu Leu Leu Cys Ala Phe Arg Leu Pro
626 1 5 10 15
629 Leu Ala Ala Val Gly Pro Ala Ala Thr Pro Ala Gln Asp Lys Ala Gly
630 20 25 30
633 Gln Pro Pro Thr Ala Ala Ala Ala Ala Gln Pro Arg Arg Arg Gln Gly
634 35 40 45
637 Glu Glu Val Gln Glu Arg Ala Glu Pro Pro Gly His Pro His Pro Leu
638 50 55 60
641 Ala Gln Arg Arg Arg Ser Lys Gly Leu Val Gln Asn Ile Asp Gln Leu
642 65 70 75 80
645 Tyr Ser Gly Gly Gly Lys Val Gly Tyr Leu Val Tyr Ala Gly Gly Arg
646 85 90 95
649 Arg Phe Leu Leu Asp Leu Glu Arg Asp Gly Ser Val Gly Ile Ala Gly
650 100 105 110
653 Phe Val Pro Ala Gly Gly Gly Thr Ser Ala Pro Trp Arg His Arg Ser
654 115 120 125
657 His Cys Phe Tyr Arg Gly Thr Val Asp Ala Ser Pro Arg Ser Leu Ala
658 130 135 140
661 Val Phe Asp Leu Cys Gly Gly Leu Asp Gly Phe Phe Ala Val Lys His
662 145 150 155 160
665 Ala Arg Tyr Thr Leu Lys Pro Leu Leu Arg Gly Pro Trp Ala Glu Glu
666 165 170 175
669 Glu Lys Gly Arg Val Tyr Gly Asp Gly Ser Ala Arg Ile Leu His Val
670 180 185 190
673 Tyr Thr Arg Glu Gly Phe Ser Phe Glu Ala Leu Pro Pro Arg Ala Ser
674 195 200 205
677 Cys Glu Thr Pro Ala Ser Thr Pro Glu Ala His Glu His Ala Pro Ala
678 210 215 220
681 His Ser Asn Pro Ser Gly Arg Ala Ala Leu Ala Ser Gln Leu Leu Asp
682 225 230 235 240
685 Gln Ser Ala Leu Ser Pro Ala Gly Gly Ser Gly Pro Gln Thr Trp Trp
686 245 250 255
689 Arg Arg Arg Arg Arg Ser Ile Ser Arg Ala Arg Gln Val Glu Leu Leu
690 260 265 270
693 Leu Val Ala Asp Ala Ser Met Ala Arg Leu Tyr Gly Arg Gly Leu Gln
694 275 280 285
697 His Tyr Leu Leu Thr Leu Ala Ser Ile Ala Asn Arg Leu Tyr Ser His
698 290 295 300

```

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

701 Ala Ser Ile Glu Asn His Ile Arg Leu Ala Val Val Lys Val Val Val
702 305                               310                               315                               320
705 Leu Gly Asp Lys Asp Lys Ser Leu Glu Val Ser Lys Asn Ala Ala Thr
706                               325                               330                               335
709 Thr Leu Lys Asn Phe Cys Lys Trp Gln His Gln His Asn Gln Leu Gly
710                               340                               345                               350
713 Asp Asp His Glu Glu His Tyr Asp Ala Ala Ile Leu Phe Thr Arg Glu
714                               355                               360                               365
717 Asp Leu Cys Gly His His Ser Cys Asp Thr Leu Gly Met Ala Asp Val
718                               370                               375                               380
721 Gly Thr Ile Cys Ser Pro Glu Arg Ser Cys Ala Val Ile Glu Asp Asp
722 385                               390                               395                               400
725 Gly Leu His Ala Ala Phe Thr Val Ala His Glu Ile Gly His Leu Leu
726                               405                               410                               415
729 Gly Leu Ser His Asp Asp Ser Lys Phe Cys Glu Glu Thr Phe Gly Ser
730                               420                               425                               430
733 Thr Glu Asp Lys Arg Leu Met Ser Ser Ile Leu Thr Ser Ile Asp Ala
734                               435                               440                               445
737 Ser Lys Pro Trp Ser Lys Cys Thr Ser Ala Thr Ile Thr Glu Phe Leu
738                               450                               455                               460
741 Asp Asp Gly His Gly Asn Cys Leu Leu Asp Leu Pro Arg Lys Gln Ile
742 465                               470                               475                               480
745 Leu Gly Pro Glu Glu Leu Pro Gly Gln Thr Tyr Asp Ala Thr Gln Gln
746                               485                               490                               495
749 Cys Asn Leu Thr Phe Gly Pro Glu Tyr Ser Val Cys Pro Gly Met Asp
750                               500                               505                               510
753 Val Cys Ala Arg Leu Trp Cys Ala Val Val Arg Gln Gly Gln Met Val
754                               515                               520                               525
757 Cys Leu Thr Lys Lys Leu Pro Ala Val Glu Gly Thr Pro Cys Gly Lys
758                               530                               535                               540
761 Gly Arg Ile Cys Leu Gln Gly Lys Cys Val Asp Lys Thr Lys Lys Lys
762 545                               550                               555                               560
765 Tyr Tyr Ser Thr Ser Ser His Gly Asn Trp Gly Ser Trp Gly Ser Trp
766                               565                               570                               575
769 Gly Gln Cys Ser Arg Ser Cys Gly Gly Gly Val Gln Phe Ala Tyr Arg
770                               580                               585                               590
773 His Cys Asn Asn Pro Ala Pro Arg Asn Asn Gly Arg Tyr Cys Thr Gly
774                               595                               600                               605
777 Lys Arg Ala Ile Tyr Arg Ser Cys Ser Leu Met Pro Cys Pro Pro Asn
778                               610                               615                               620
781 Gly Lys Ser Phe Arg His Glu Gln Cys Glu Ala Lys Asn Gly Tyr Gln
782 625                               630                               635                               640
785 Ser Asp Ala Lys Gly Val Lys Thr Phe Val Glu Trp Val Pro Lys Tyr
786                               645                               650                               655
789 Ala Gly Val Leu Pro Ala Asp Val Cys Lys Leu Thr Cys Arg Ala Lys
790                               660                               665                               670
793 Gly Thr Gly Tyr Tyr Val Val Phe Ser Pro Lys Val Thr Asp Gly Thr
794                               675                               680                               685
797 Glu Cys Arg Pro Tyr Ser Asn Ser Val Cys Val Arg Gly Lys Cys Val

```

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

798      690      695      700
801 Arg Thr Gly Cys Asp Gly Ile Ile Gly Ser Lys Leu Gln Tyr Asp Lys
802 705      710      715      720
805 Cys Gly Val Cys Gly Gly Asp Asn Ser Ser Cys Thr Lys Ile Val Gly
806      725      730      735
809 Thr Phe Asn Lys Lys Ser Lys Gly Tyr Thr Asp Val Val Arg Ile Pro
810      740      745      750
813 Glu Gly Ala Thr His Ile Lys Val Arg Gln Phe Lys Ala Lys Asp Gln
814      755      760      765
817 Thr Arg Phe Thr Ala Tyr Leu Ala Leu Lys Lys Lys Asn Gly Glu Tyr
818      770      775      780
821 Leu Ile Asn Gly Lys Tyr Met Ile Ser Thr Ser Glu Thr Ile Ile Asp
822 785      790      795      800
825 Ile Asn Gly Thr Val Met Asn Tyr Ser Gly Trp Ser His Arg Asp Asp
826      805      810      815
829 Phe Leu His Gly Met Gly Tyr Ser Ala Thr Lys Glu Ile Leu Ile Val
830      820      825      830
833 Gln Ile Leu Ala Thr Asp Pro Thr Lys Pro Leu Asp Val Arg Tyr Ser
834      835      840      845
837 Phe Phe Val Pro Lys Lys Ser Thr Pro Lys Val Asn Ser Val Thr Ser
838      850      855      860
841 His Gly Ser Asn Lys Val Gly Ser His Thr Ser Gln Pro Gln Trp Val
842 865      870      875      880
845 Thr Gly Pro Trp Leu Ala Cys Ser Arg Thr Cys Asp Thr Gly Trp His
846      885      890      895
849 Thr Arg Thr Val Gln Cys Gln Asp Gly Asn Arg Lys Leu Ala Lys Gly
850      900      905      910
853 Cys Pro Leu Ser Gln Arg Pro Ser Ala Phe Lys Gln Cys Leu Leu Lys
854      915      920      925
857 Lys Cys
858      930
861 <210> SEQ ID NO: 16
862 <211> LENGTH: 42
863 <212> TYPE: PRT
864 <213> ORGANISM: Homo sapiens
866 <400> SEQUENCE: 16
868 Ser Ile Ser Arg Ala Arg Gln Val Glu Leu Leu Val Ala Asp Ala
869 1      5      10      15
872 Ser Met Ala Arg Met Tyr Gly Arg Gly Leu Gln His Tyr Leu Leu Thr
873      20      25      30
876 Leu Ala Ser Ile Ala Asn Lys Leu Tyr Phe
877      35      40
880 <210> SEQ ID NO: 17
881 <211> LENGTH: 23
882 <212> TYPE: DNA
883 <213> ORGANISM: Mus musculus
885 <400> SEQUENCE: 17
886 cggccacgac cctcaagaac ttt
889 <210> SEQ ID NO: 18

```

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## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

890 <211> LENGTH: 25  
 891 <212> TYPE: DNA  
 892 <213> ORGANISM: Mus musculus  
 894 <400> SEQUENCE: 18  
 895 gcatggaggc catcatcttc aatca 25  
 898 <210> SEQ ID NO: 19  
 899 <211> LENGTH: 22  
 900 <212> TYPE: DNA  
 901 <213> ORGANISM: Homo sapiens  
 903 <400> SEQUENCE: 19  
 904 gggaggattt atgtgggcat ca 22  
 907 <210> SEQ ID NO: 20  
 908 <211> LENGTH: 23  
 909 <212> TYPE: DNA  
 910 <213> ORGANISM: Homo sapiens  
 912 <400> SEQUENCE: 20  
 913 gtgcatttgg accagggctt aga 23  
 916 <210> SEQ ID NO: 21  
 917 <211> LENGTH: 13  
 918 <212> TYPE: PRT  
 919 <213> ORGANISM: Artificial Sequence  
 921 <220> FEATURE:  
 922 <223> OTHER INFORMATION: Synthesized peptide  
 924 <220> FEATURE:  
 925 <221> NAME/KEY: MISC\_FEATURE  
 926 <222> LOCATION: (12)..(12)  
 927 <223> OTHER INFORMATION: Acp  
 930 <220> FEATURE:  
 931 <221> NAME/KEY: MOD\_RES  
 932 <222> LOCATION: (12)..(12)  
 933 <223> OTHER INFORMATION: Acp  
 936 <400> SEQUENCE: 21  
 W--> 938 Ser Ile Ser Arg Ala Arg Gln Val Glu Leu Leu Xaa Cys  
 939 1 5 10  
 942 <210> SEQ ID NO: 22  
 943 <211> LENGTH: 14  
 944 <212> TYPE: PRT  
 945 <213> ORGANISM: homo sapiens  
 947 <400> SEQUENCE: 22  
 949 Asn Ile Thr Glu Gly Glu Ala Arg Gly Ser Val Ile Leu Thr  
 950 1 5 10  
 953 <210> SEQ ID NO: 23  
 954 <211> LENGTH: 14  
 955 <212> TYPE: PRT  
 956 <213> ORGANISM: bovine  
 958 <400> SEQUENCE: 23  
 960 Asn Ile Thr Glu Gly Glu Ala Arg Gly Ser Val Ile Leu Thr  
 961 1 5 10  
 964 <210> SEQ ID NO: 24

*delete - duplicated*

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

965 <211> LENGTH: 14
966 <212> TYPE: PRT
967 <213> ORGANISM: rat
969 <400> SEQUENCE: 24
971 Asn Ile Thr Glu Gly Glu Ala Arg Gly Asn Val Ile Leu Thr
972 1 5 10
975 <210> SEQ ID NO: 25
976 <211> LENGTH: 14
977 <212> TYPE: PRT
978 <213> ORGANISM: mouse
980 <400> SEQUENCE: 25
982 Asn Val Thr Glu Gly Glu Ala Leu Gly Ser Val Ile Leu Thr
983 1 5 10
986 <210> SEQ ID NO: 26
987 <211> LENGTH: 14
988 <212> TYPE: PRT
989 <213> ORGANISM: pig
991 <400> SEQUENCE: 26
993 Asn Ile Thr Glu Gly Glu Ala Arg Gly Thr Val Ile Leu Thr
994 1 5 10
997 <210> SEQ ID NO: 27
998 <211> LENGTH: 14
999 <212> TYPE: PRT
1000 <213> ORGANISM: sheep
1002 <400> SEQUENCE: 27
1004 Asn Ile Thr Glu Gly Glu Ala Arg Gly Asn Val Ile Leu Thr
1005 1 5 10
1008 <210> SEQ ID NO: 28
1009 <211> LENGTH: 11
1010 <212> TYPE: PRT
1011 <213> ORGANISM: chicken
1013 <400> SEQUENCE: 28
1015 Asn Val Thr Glu Glu Glu Ala Arg Gly Ser Ile
1016 1 5 10
1019 <210> SEQ ID NO: 29
1020 <211> LENGTH: 14
1021 <212> TYPE: PRT
1022 <213> ORGANISM: horse
1024 <400> SEQUENCE: 29
1026 Asn Ile Thr Glu Gly Glu Ala Arg Gly Asn Val Ile Leu Thr
1027 1 5 10
1030 <210> SEQ ID NO: 30
1031 <211> LENGTH: 16
1032 <212> TYPE: PRT
1033 <213> ORGANISM: homo sapiens
1035 <400> SEQUENCE: 30
1037 Ala Ser Thr Ala Ser Glu Leu Glu Gly Arg Gly Thr Ile Gly Ile Ser
1038 1 5 10 15
1041 <210> SEQ ID NO: 31

```

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

1042 <211> LENGTH: 16
1043 <212> TYPE: PRT
1044 <213> ORGANISM: bovine
1046 <400> SEQUENCE: 31
1048 Ala Thr Thr Ala Gly Glu Leu Glu Gly Arg Gly Thr Ile Asp Ile Ser
1049 1 5 10 15
1052 <210> SEQ ID NO: 32
1053 <211> LENGTH: 16
1054 <212> TYPE: PRT
1055 <213> ORGANISM: mouse
1057 <400> SEQUENCE: 32
1059 Ala Thr Thr Ser Ser Glu Leu Glu Gly Arg Gly Thr Ile Gly Ile Ser
1060 1 5 10 15
1063 <210> SEQ ID NO: 33
1064 <211> LENGTH: 16
1065 <212> TYPE: PRT
1066 <213> ORGANISM: rat
1068 <400> SEQUENCE: 33
1070 Ala Thr Thr Ala Ser Glu Leu Glu Gly Arg Gly Thr Ile Ser Val Ser
1071 1 5 10 15
1074 <210> SEQ ID NO: 34
1075 <211> LENGTH: 16
1076 <212> TYPE: PRT
1077 <213> ORGANISM: homo sapiens
1079 <400> SEQUENCE: 34
1081 Pro Thr Thr Phe Lys Glu Glu Glu Gly Leu Gly Ser Val Glu Leu Ser
1082 1 5 10 15
1085 <210> SEQ ID NO: 35
1086 <211> LENGTH: 16
1087 <212> TYPE: PRT
1088 <213> ORGANISM: bovine
1090 <400> SEQUENCE: 35
1092 Pro Thr Thr Phe Lys Glu Glu Glu Gly Leu Gly Ser Val Glu Leu Ser
1093 1 5 10 15
1096 <210> SEQ ID NO: 36
1097 <211> LENGTH: 16
1098 <212> TYPE: PRT
1099 <213> ORGANISM: rat
1101 <400> SEQUENCE: 36
1103 Pro Thr Thr Phe Arg Glu Glu Glu Gly Leu Gly Ser Val Glu Leu Ser
1104 1 5 10 15
1107 <210> SEQ ID NO: 37
1108 <211> LENGTH: 16
1109 <212> TYPE: PRT
1110 <213> ORGANISM: mouse
1112 <400> SEQUENCE: 37
1114 Pro Thr Thr Phe Arg Glu Glu Glu Gly Leu Gly Ser Val Glu Leu Ser
1115 1 5 10 15
1118 <210> SEQ ID NO: 38

```



## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

1119 <211> LENGTH: 16
1120 <212> TYPE: PRT
1121 <213> ORGANISM: homo sapiens
1123 <400> SEQUENCE: 38
1125 Thr Gln Ala Pro Thr Ala Gln Glu Ala Gly Glu Gly Pro Ser Gly Ile
1126 1 5 10 15
1129 <210> SEQ ID NO: 39
1130 <211> LENGTH: 16
1131 <212> TYPE: PRT
1132 <213> ORGANISM: bovine
1134 <400> SEQUENCE: 39
1136 Thr Gln Ala Pro Thr Ala Gln Glu Ala Gly Glu Gly Pro Ser Gly Ile
1137 1 5 10 15
1140 <210> SEQ ID NO: 40
1141 <211> LENGTH: 16
1142 <212> TYPE: PRT
1143 <213> ORGANISM: rat
1145 <400> SEQUENCE: 40
1147 Thr Leu Ala Pro Thr Ala Gln Glu Ala Gly Glu Gly Pro Ser Ser Ile
1148 1 5 10 15
1151 <210> SEQ ID NO: 41
1152 <211> LENGTH: 16
1153 <212> TYPE: PRT
1154 <213> ORGANISM: mouse
1156 <400> SEQUENCE: 41
1158 Thr Gln Ala Pro Thr Ala Gln Glu Ala Gly Glu Gly Pro Ser Gly Ile
1159 1 5 10 15
1162 <210> SEQ ID NO: 42
1163 <211> LENGTH: 16
1164 <212> TYPE: PRT
1165 <213> ORGANISM: chicken
1167 <400> SEQUENCE: 42
1169 Thr Gln Thr Ser Val Ala Gln Glu Val Gly Glu Gly Pro Ser Gly Met
1170 1 5 10 15
1173 <210> SEQ ID NO: 43
1174 <211> LENGTH: 17
1175 <212> TYPE: PRT
1176 <213> ORGANISM: homo sapiens
1178 <400> SEQUENCE: 43
1180 Thr Glu Pro Thr Ile Ser Gln Glu Leu Leu Gly Gln Arg Pro Pro Val
1181 1 5 10 15
1184 Thr
1188 <210> SEQ ID NO: 44
1189 <211> LENGTH: 16
1190 <212> TYPE: PRT
1191 <213> ORGANISM: bovine
1193 <400> SEQUENCE: 44
1195 Thr Glu Pro Thr Val Ser Gln Glu Leu Gly Gln Arg Pro Pro Val Thr
1196 1 5 10 15

```

## RAW SEQUENCE LISTING

DATE: 05/07/2003

PATENT APPLICATION: US/09/634,287C

TIME: 13:34:19

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

```

1199 <210> SEQ ID NO: 45
1200 <211> LENGTH: 16
1201 <212> TYPE: PRT
1202 <213> ORGANISM: rat
1204 <400> SEQUENCE: 45
1206 Thr Glu Pro Thr Val Ser Gln Glu Leu Gly His Gly Pro Ser Met Thr
1207 1 5 10 15
1210 <210> SEQ ID NO: 46
1211 <211> LENGTH: 16
1212 <212> TYPE: PRT
1213 <213> ORGANISM: mouse
1215 <400> SEQUENCE: 46
1217 Thr Glu Pro Thr Val Ser Gln Glu Leu Gly His Gly Pro Ser Met Thr
1218 1 5 10 15
1221 <210> SEQ ID NO: 47
1222 <211> LENGTH: 16
1223 <212> TYPE: PRT
1224 <213> ORGANISM: chicken
1226 <400> SEQUENCE: 47
1228 Thr Arg Pro Thr Val Ser Gln Glu Leu Gly Gly Glu Thr Ala Val Thr
1229 1 5 10 15
1232 <210> SEQ ID NO: 48
1233 <211> LENGTH: 16
1234 <212> TYPE: PRT
1235 <213> ORGANISM: dog
1237 <400> SEQUENCE: 48
1239 Thr Glu Pro Thr Val Ser Gln Glu Leu Ala Gln Arg Pro Pro Val Thr
1240 1 5 10 15

```

**VERIFICATION SUMMARY**

PATENT APPLICATION: . US/09/634,287C

DATE: 05/07/2003

TIME: 13:34:20

Input Set : A:\DM6909.ST25.txt

Output Set: N:\CRF4\05072003\I634287C.raw

L:391 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQ ID NO  
 L:392 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:0 differs:2  
 L:392 M:283 W: Missing Blank Line separator, <400> field identifier  
 L:393 M:300 W: (50) Intentionally skipped Sequence, : Sequence Id (0) SEQUENCE:  
 L:938 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0